

Paper No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

COREPHOTONICS, LTD.,
Patent Owner

IPR2020-00878
Patent No. 10,330,897

PETITIONER'S REPLY

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II. Claims 1, 4, 9-15, 17, 20, and 25-29 are anticipated by Ogino’s Example 5 embodiment.1

III. Claims 2, 5, 6, 18, and 21-23 are obvious over Ogino’s Example 5 embodiment in view of Bateau.....1

A. A POSITA would have been motivated to modify Ogino’s Example 5 lens as shown.1

1. A POSITA would have found Ogino Example 5 to be a reasonable starting place.2

2. Dr. Sasián used the same techniques that a POSITA would have used to generate the modified lenses of Ogino Ex. 5.6

B. Manufacturing considerations are not required by the ’897 claims nor can they be imported to avoid unpatentability.8

1. Patent Owner seeks to import manufacturing requirements into the ’897 claims where there are none.8

2. Patent Owner’s arguments contradict statements made in a related case, and supported by a different expert, that lens design is separate from manufacturing.11

3. Patent Owner’s expert admits that a POSITA would have designed lenses for purposes other than mass production manufacturing.13

4. Manufacturing considerations are preferences, and do not show that lenses cannot be physically produced.16

5. Whether a prior art lens design is finished is not relevant to the claims of the ’897.17

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PETITIONER'S EXHIBIT LIST

Updated: April 30, 2021

APPL-1001	U.S. Patent No. 10,330,897
APPL-1002	Prosecution History of U.S. Patent No. 10,330,897
APPL-1003	Declaration of José Sasián, Ph.D., under 37 C.F.R. § 1.68
APPL-1004	Curriculum Vitae of José Sasián, Ph.D.
APPL-1005	U.S. Patent No. 9,128,267 to Ogino et al. ("Ogino")
APPL-1006	Warren J. Smith, MODERN LENS DESIGN (1992) ("Smith")
APPL-1007	William S. Beich et al., "Polymer Optics: A manufacturer's perspective on the factors that contribute to successful programs," SPIE Proceedings Volume 7788, Polymer Optics Design, Fabrication, and Materials (August 12, 2010), https://doi.org/10.1117/12.861364 ("Beich")
APPL-1008	U.S. Patent No. 7,777,972 to Chen et al. ("Chen")
APPL-1009	U.S. Patent No. 9,678,310 to Iwasaki et al. ("Iwasaki")
APPL-1010	Max Born et al., PRINCIPLES OF OPTICS, 6 th Ed. (1980) ("Born")
APPL-1011	Prosecution history of U.S. Patent No. 9,128,267 to Ogino
APPL-1012	Jane Bateau et al., "The optics of miniature digital camera modules," SPIE Proceedings Volume 6342, <i>International Optical Design Conference 2006</i> ; 63421F (2006) https://doi.org/10.1117/12.692291 ("Bateau")
APPL-1013	Rudolf Kingslake, OPTICS IN PHOTOGRAPHY (1992) ("Kingslake")
APPL-1014	U.S. Patent No. 7,859,588 to Parulski et al. ("Parulski")
APPL-1015	Japanese Patent Pub. No. JP2013106289 to Konno et al. and certified English translation

APPL-1016	Bruce J. Walker, OPTICAL ENGINEERING FUNDAMENTALS (1995) (“Walker”)
APPL-1017	Robert E. Fischer, Optical System Design (2008) (“Fischer”)
APPL-1018	Alan Symmons & Michael Schaub, FIELD GUIDE TO MOLDED OPTICS (2016) (“Schaub”)
APPL-1019	Optical Society of America, HANDBOOK OF OPTICS, vol. II 2nd ed. (1995) (“Handbook of Optics”)
APPL-1020	U.S. Patent No. 10,324,273 to Chen et al. (“Chen”)
APPL-1021	U.S. Patent No. 9,857,568
APPL-1022	U.S. Patent No. 9,568,712
APPL-1023	Deposition Transcript of Duncan Moore, Ph.D. in IPR2018-01140
APPL-1024	U.S. Patent No. 7,321,475 to Wang et al.
APPL-1025	Greg Hollows et al., “Matching lenses and sensors”, Vision Systems design (March 2009)
APPL-1026	Prosecution history of U.S. Patent No. 9,678,310 to Iwasaki et al.
APPL-1027	Email from Patent Owner’s counsel authorizing electronic service
APPL-1028 (NEW)	Deposition Transcript of Tom Milster, Ph.D.
APPL-1029 (NEW)	IPR 2019-00030, Paper 21
APPL-1030 (NEW)	IPR 2019-00030, Ex. 2002
APPL-1031 (NEW)	Michael P. Schaub, THE DESIGN OF PLASTIC OPTICAL SYSTEMS (2009)
APPL-1032 (NEW)	IPR 2018-01140, Paper 2

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